

# **Results of the 2003 Survey of the Reintroduced Sea Otter Population in Washington State**

Prepared by

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The survey was conducted from 8-10 July, and included the entire inshore area from Pt. Grenville to Pillar Point. Biologists from the Washington Department of Fish and Wildlife, United States Fish and Wildlife Service, United States Geological Survey, Olympic Coast National Marine Sanctuary, The Seattle Aquarium and the Point Defiance Aquarium and Zoo participated in the survey. Counting conditions this year ranged from fair to excellent.

## **Methods**

Most of the range was surveyed from a fixed-winged aircraft (Cessna 185) with additional counts made by observers on the ground at Cape Johnson, Yellow Banks, Sand Point, Cape Alava, Duk Point (Seafield Creek), and Anderson Pt. Two surveys are conducted each day over a period of 3 days, weather permitting. Thus, when conditions are favorable, six surveys of the entire range are completed. An offshore leg added in 1999 to detect open water groups was included again this year. This year 5 counts were completed, one on 8 July and 2 each on 9 and 10 July.

The survey total is calculated by summing the highest daily total for the southern (Pt Grenville to La Push) and northern (La Push to Pillar Point) segments of the sea otter range (highest counts were made on 10 July south half and 9 July north half). This method assumes little or no movement between the two segments during the survey period. Examination of survey data from years past and this year, as well as documented movements of instrumented sea otters by USGS researchers in Washington support this assumption. Large groups (>20) observed from the air were generally counted and photographed. Slides were counted (3 times) and the resulting numbers were used when image quality was good and ground counts were not available or were less than the slide count.

## **Results**

The highest count for the survey was 672 sea otters, an increase of about 22% over the 2002 total (Table 1). The finite rate of increase for this population since 1989 is 8.2% (Figure 1). This year only 18 pups were counted during the high counts, with most pup observations made from ground observation sites. It is not unusual for pups to go undetected from the aircraft because they are difficult to distinguish from adults from the air; however, experienced ground counters can easily make the distinction. This year pups were seen at all ground stations.

Additionally pups were recorded from the air at Destruction Island, Diamond Rock, and Perkins Reef (Rock 443), but they don't appear in the total because they were not observed during the highest counts. In 2001, the ground count pup to adult ratio was 13:100, and in 2002 it was 15:100. The ground count ratio this year is was 8:100.

The 2003 distribution of sea otters has changed with the trend of the greater proportion of the population being south of La Push continued (Figure 1). In 2002 the southern segment accounted for about the same percentage of the total population as the northern, 49, and 51 percent respectively; however in 2003 the percentage shifted in favor of the south end with 46% north and 54 % south. As in 2001, the Diamond Rock raft located about 4 kilometers south of the Perkins Reef (Rock 443) group and 1.5 kilometers north of the Hoh River mouth was still there. Pups were seen in this group for the past two years and along with the female group at Destruction Island represent the most southern groups of breeding females in Washington. The single largest concentration of sea otters continues to be located at Destruction Island with 270 otters counted during this year's survey. A large male group continues to be found at Destruction Island, primarily rafting in the northeast reef and kelp bed areas. The reproducing female raft of over 40 individuals was located at the southwest end of the island.

Survey results this year indicate the growth of the Washington sea otter population, continues to remain positive (Figure 2); however, counts indicate Washington's sea otter population may be approaching equilibrium density north of La Push. The rate of increase there has been about 3.5% since 1989. Nevertheless, there still appears to be some quality unoccupied habitat available north of the Point of Arches. South of La Push the population has been growing at over 20% since 1989 (Figure 3). This trend began in the mid nineties and has continued to date. These results illustrate the importance of continuing annual surveys to track changes in population trends and distribution.

As in 2002, our survey area did not include inland waters east of Pillar Point i.e. Puget Sound, yet we are aware of several credible sightings of scattered individual sea otters in 2003. The frequency of such sightings seems to be increasing, but the actual number of individuals involved continues to be low. Most sightings have been of single animals. No groups have been noted to date, and we believe the number frequenting the inland waters would not add significantly to the population total. Also of note, the groups that were moving into the western Strait of Juan de Fuca each winter have not appeared since 2000. No groups were reported during winter 2003.

**Table 1. Results of the July 2003 and 2002 sea otter surveys in Washington State.**

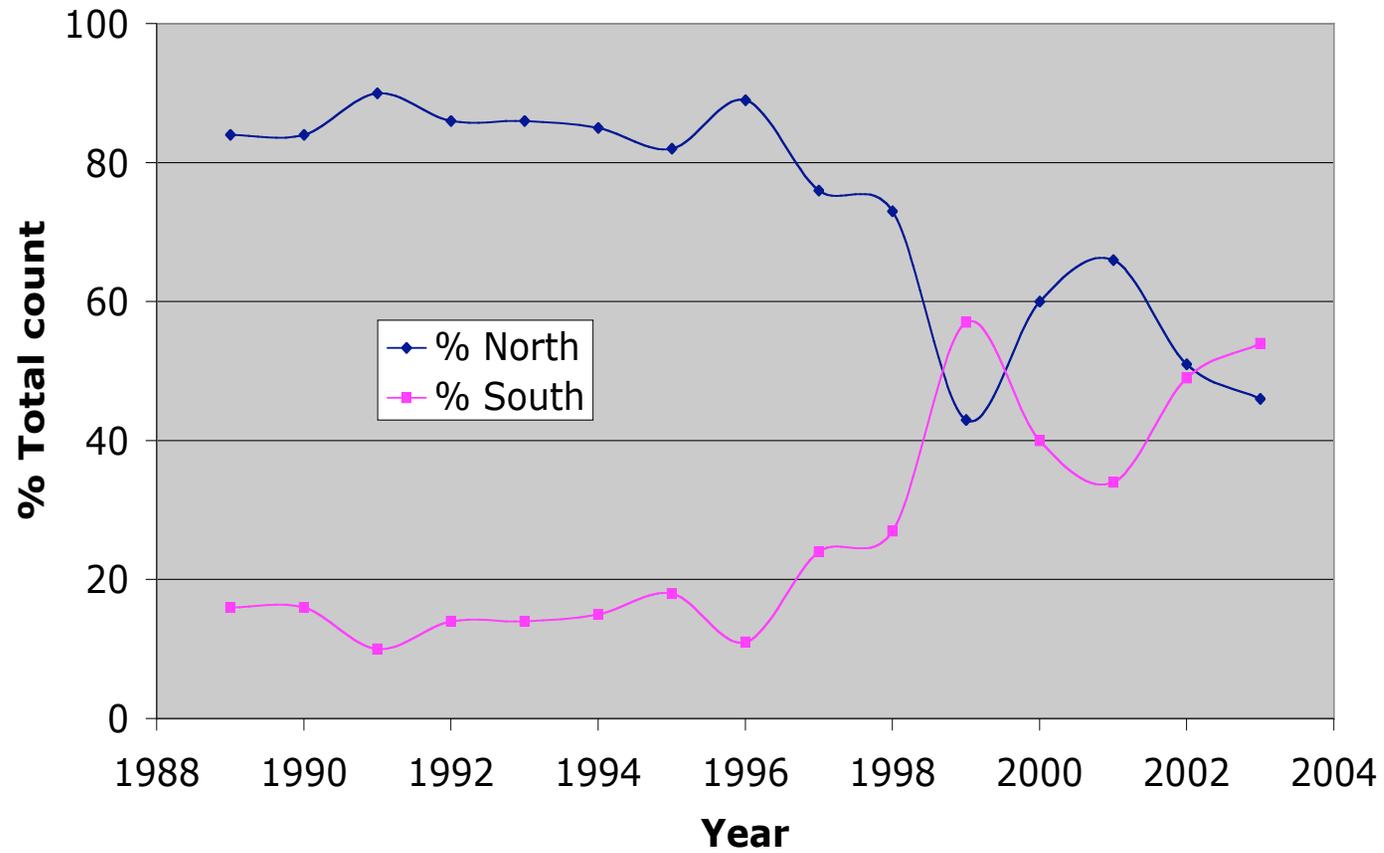
	2003			2002		
	ADULT	PUPS	TOTAL	ADULT	PUPS	TOTAL
DESTRUCTION I. <sup>1,3</sup>	270	0	270	181	0	181
HOH RIVER MOUTH	0	0	0	1	0	1
DIAMOND ROCK <sup>3</sup>	3	0	3	24	0	24
NORTH ROCK	1	0	1	0	0	0
PERKINS REEF1 (ROCK 443) <sup>1,3</sup>	88	0	88	53	3	56
GOODMAN CREEK	1	1	2	6	0	6
GIANTS GRAVEYARD	1	0	1	1	0	1
QUILLAYUTE NEEDLES	0	0	0	1	0	1
S. CAPE JOHNSON/CHILEAN MEMORIAL	1	0	1	2	0	2
CAPE JOHNSON/BLUFF PT. <sup>1,2</sup>	64	0	64	45	0	45
CARROL ISLAND/ SEA LION ROCK	0	0	0	1	0	1
SANDY I.	9	1	10	1	0	1
JAGGED I.	0	0	0	7	0	7
CEDAR CRK./NOR. MEM. <sup>1</sup>	20	1	21	30	0	30
NORTH KAYOSTLA BEACH	1	0	1	0	0	0
YELLOW BANKS AREA <sup>1,2</sup>	23	2	25	25	0	25
SAND PT. <sup>2</sup>	21	1	22	16	1	17
INSHORE WHITE ROCK /WEDDING ROCKS	1	0	1	5	1	6
OZETTE/CAPE ALAVA/BODELTEH*	20	3	23	43	13	56
WEST END OF BODELTEH	0	0	0	0	0	0
DUK PT. <sup>*1</sup>	120	8	128	40	3	43
FATHER AND SON	0	0	0	36	12	48
PT. OF ARCHES	1	0	1	0	0	0
SHI SHI BEACH	1	0	1	0	0	0
S. PORTAGE HEAD	1	0	1	0	0	0
ANDERSON PT.*	5	1	6	0	0	0
WAATCH PT.	2	0	2	0	0	0
<b>TOTALS</b>	<b>654</b>	<b>18</b>	<b>672</b>	<b>518</b>	<b>33</b>	<b>551</b>

<sup>1</sup> Includes count from aerial photograph.

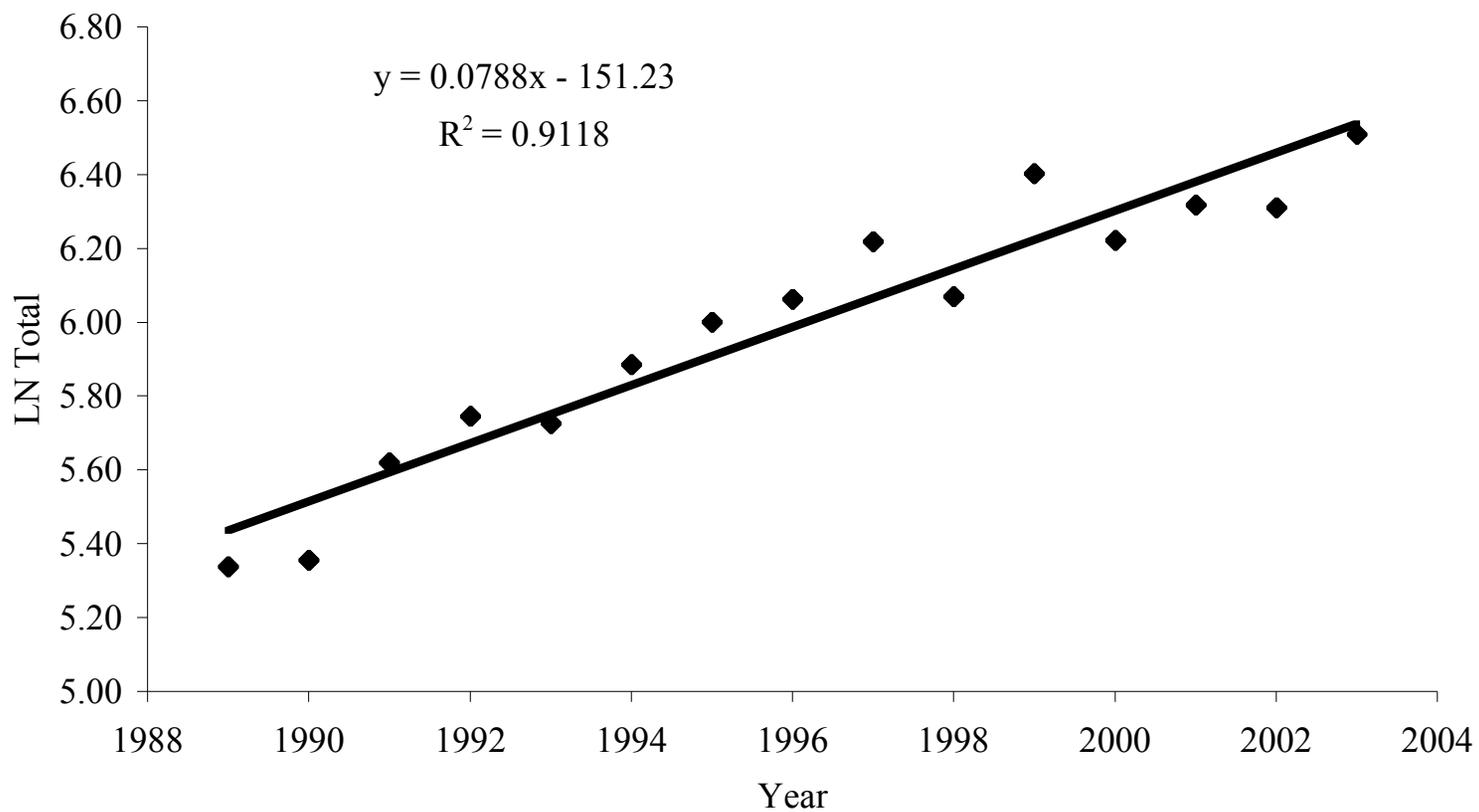
<sup>2</sup> Counted from land-based stations.

<sup>3</sup> Pups were observed at these locations during the survey period, but not when the high count was made.

Figure 1. Distribution of sea otters in Washington as a percentage of total population count, 1989-2003.



**Figure 2.** Growth of the Washington sea otter population 1989-2003



**Figure 3.** Three-year Running Average for the Northern and Southern Portions of the Sea Otter Range in Washington.

